

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-39. (Canceled)

40. **(Currently amended)** A method of producing an oriented oxide superconducting film, comprising:

providing a metal oxyfluoride film on a biaxially textured substrate, said metal oxyfluoride film comprising the constituent metallic elements of an oxide superconductor in substantially stoichiometric proportions;

initiating conversion of converting the metal oxyfluoride into the oxide superconductor film in a processing gas having a moisture content of less than 1% by mass and a total pressure less than about 8 Torr atmospheric pressure under conditions that enable the removal of HF from the film surface, wherein the oriented oxide superconducting film exhibits c-axis texturing, and wherein the total pressure is less than about 8 Torr.

41. (Canceled)

42. **(Previously presented)** The method of claim 40, wherein the total pressure is less than about 1 Torr.

43. **(Original)** The method of claim 42, wherein the total pressure is less than about 0.1 Torr.

44. **(Original)** The method of claim 43, wherein the total pressure is less than about 0.01 Torr.

45. (Canceled)

46. **(Previously presented)** The method of claim 44, wherein the total pressure is less than about 0.001 Torr.

47. **(Original)** The method of claim 40, wherein the processing gas consists substantially of water vapor and oxygen.

48. **(Canceled)**

49. **(Previously presented)** The method of claim 85, wherein the buffer layer comprises a member of yttria-stabilized zirconia, LaAlO_3 , SrTiO_3 , CeO_2 , Y_2O_3 , and MgO and any combination of the above.

50. **(Original)** The method of claim 40, wherein the film has a thickness of at least $0.3\mu\text{m}$.

51. **(Previously presented)** The method of claim 50, wherein the film has a thickness of at least $0.5\mu\text{m}$.

52. **(Original)** The method of claim 51, wherein the film has a thickness of at least $0.8\mu\text{m}$.

53. **(Original)** The method of claim 52, wherein the film has a thickness of at least $1\mu\text{m}$.

54. **(Original)** The method of claim 40, wherein the superconductor comprises YBCO.

55. **(Original)** The method of claim 40, wherein the substrate comprises a ceramic.

56. **(Original)** The method of claim 55, wherein the ceramic is selected from the group consisting of YSZ, LaAlO_3 , SrTiO_3 , CeO_2 , and MgO .

57. **(Previously presented)** The method of claim 40, wherein the substrate comprises a metal.

58. **(Original)** The method of claim 57, wherein the metal is selected from steel, nickel, iron, molybdenum, copper, silver, and alloys and mixtures thereof.

59. **(Original)** The method of claim 40, wherein the film has a Jc greater than 0.45 MA/cm².

60. **(Original)** The method of claim 59, wherein the film has a Jc greater than 1 MA/cm².

61. **(Original)** The method of claim 60, wherein the film has a Jc greater than 2 MA/cm².

62. **(Original)** The method of claim 61, wherein the film has a Jc greater than 4 MA/cm².

63-84. **(Canceled)**

85. **(Previously presented)** The method of claim 40, further comprising depositing a buffer layer on the substrate before providing the metal oxyfluoride film on the substrate.

86-89. **(Canceled)**

90. **(New)** The method of claim 40, wherein the water partial pressure during the step of initiating conversion is less than 10 mTorr.

91. **(New)** The method of claim 40, wherein the water partial pressure during the step of initiating conversion is less than 5 mTorr.

92. (New) The method of claim 40, wherein the water partial pressure during the step of initiating conversion is less than 1 mTorr.

93. (New) The method of claim 40, further comprising completing conversion of the metal oxyfluoride into the oxide superconductor in a processing gas having a moisture content greater than in the step of initiating conversion and a total pressure less than about 8 Torr.

94. (New) The method of claim 93, wherein the processing gas in the step of completing conversion has a water partial pressure between 150 mTorr and 350 mTorr.